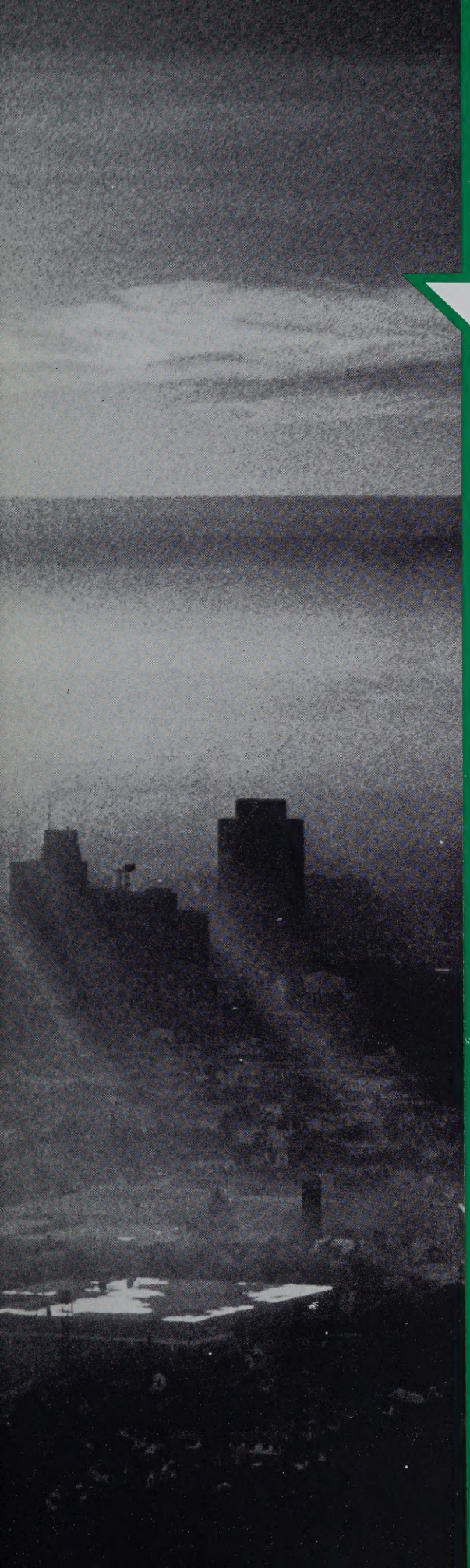
Texas Highways

December 1963



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About Our Cover

Just as the last rays of sunset peeked over the Guadalupe Mountain tops, Jack Lewis snapped this foliage stillife of Red Oak and Sotol in McKittrick Canyon off U.S. 180 and 62 near Pine Springs. The sun-tipped foliage silhouetted against a shadowed canyon wall produced a simple but exquisite composition splendid as a Christmas centerpiece for a fireplace mantel. Indeed, the rich golden colors blended with the serenity of wilderness twilight seem to symbolize the mystic grandeur of Christmas.

Inside Front

Jerusalem . . . or San Antonio? Actually, it's a picture of the San Antonio Skyline taken from an airplane. But with the Christmas season upon us, the mystic blending of clouds and light awaken visions of the Holy Land.

THE MANTLE OF RESPONSIBILITY

Occasionally a speaker touches a height of unexcelled eloquence. This may be the result of a timely subject, a fervent belief in the principles being discussed—or both.

It was just such an address that Highway Commission Chairman Herbert C. Petry Jr. delivered at the opening session of the 37th Annual Highway Short Course at Texas A & M University December 3.

Every employe of the Department should have had an opportunity to have heard Mr. Petry's remarks. Notes taken at the time outline his talk—but lack the eloquence, the fervency of his delivery.

Mr. Petry said the Texas Highway Department enjoys unprecedented public confidence and esteem. He stressed that this is not a happenstance situation, but is the result of the loyalty and integrity of thousands of Department employes through the years.

He warned, too, that we cannot be complacent in the belief that we will continue to hold the confidence of the taxpaying public. Instead we must have continued pride in our work, and a determination to keep faith with those who have gone before and those who will follow.

The Commission Chairman pointed out that there is more to the building of highways than engineering. He described the importance of dedicated personnel. He outlined the need for good public relations. He declared that continued success in our endeavors is dependent upon public confidence.

"We must accept that mantle of responsibility—not only at the administrative level, but throughout the ranks—and pass it on with pride to those who follow," Mr. Petry said.

He warned that our ability to keep, and maintain, and build, a better system of highways in Texas bears a direct relationship to the degree of public confidence we merit. Loss of this confidence could result in loss of money to build the highways needed for continued growth of the State.

"And don't think that that confidence—and that money—can't be lost," Mr. Petry declared. "It's hard to appear before a legislative committee to defend highway construction income from further non-highway dispersion proposed by the sponsors of a worthy project.

"But so long as we keep faith with the public then we will enjoy public confidence. We must give a dollar's worth of highway for every dollar spent."

Each Department employe has a personal responsibility to give only the best of his talents, to do his job with pride of accomplishment, Mr. Petry said.

"Better highways contributed to the growth of Texas and because of that tremendous growth more and better highways are needed," the Commission Chairman commented. He declared:

"The highway needs of Texas are greater today than ever before in the history of the State."

Each of us shares in the responsibility to see that need is filled.

Photo Courtesy of Bureau of Economic Geology

This air view shows the Christmas Mountains at the upper left. The peak to the far left is Little Christmas Peak and the middle one is the main Christmas Peak. Toward the back are the Corazones (Hearts) Mountains and Santiago Peak; and in the foreground are the Slick Rock Mountains.

The Christmas Mountains

Many states have towns named "Christmas." Texas does not, but it does have some Christmas Mountains.

The 20-square-mile mountain range is on the northern edge of Big Bend National Park, about 75 miles south of Alpine in District 24. The highest peak in the range is 5,735 feet, with the average elevation being about 3,500 feet.

Dr. Ross A. Maxwell, a geologist at the Bureau of Economic Geology in Austin, told us about the mountains. He says the only story he's heard about why they are called the Christmas Mountains is this:

Way back around 1900 the first surveying party went into the mountains to study them to determine their value. The men entered them early in the fall and expected to finish the work on such a small mountain range in just a short time. But it was Christmas before the work was done.

"They certainly weren't called the Christmas Mountains because of any large amount of Christmas trees or shrubbery," Dr. Maxwell observed, "because they are quite barren, with mesas, buttes and ridges and canyons." He said geologists and rock collectors are interested in the mountains because of the different types of minerals found in the area.

We might point out that in case you'd ever like to visit the Christmas Mountains, you had best take along your mountain-climbing shoes. For there are no roads through the mountains, only trails. The mountains are used for rangeland.

Incidentally, Dr. Maxwell is the father of Donald A. Maxwell, Engineering Assistant II with the photogrammetry section of the Highway Design Division in Austin. ■

Here construction of a new boat ramp is nearly completed at U.S. 59 and the San Jacinto River near Humble. Near the equipment, a boater loads his boat off the rough river bank . . . no doubt wishing the new boat ramp were ready for use.

MORE BOAT RAMPS

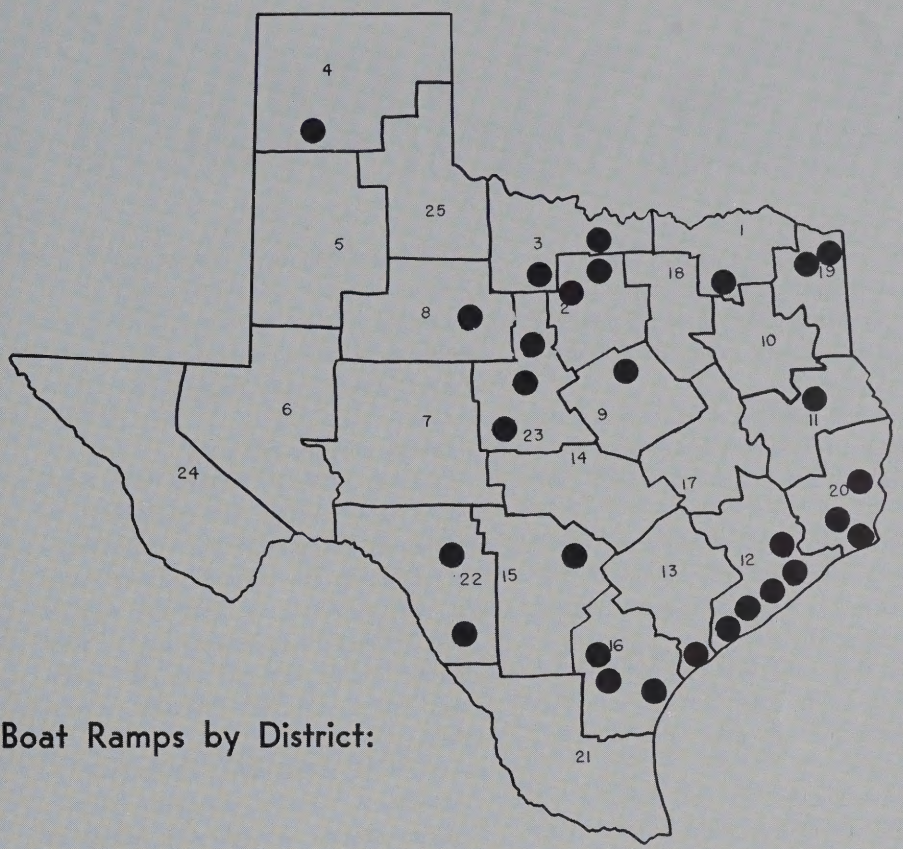
In its second annual program to provide free boating facilities on Texas waterways, the Texas Highway Commission in October authorized construction of an additional 29 boat ramp complexes throughout the state.

The Highway Department will build the launching ramps and collateral facilities at an estimated cost of $184,800 in coming months. Under the previous program, the Department already has 27 ramp projects completed, underway or programmed.

Boat ramps offer water enthusiasts year-around launching spots at no charge. Each site includes not only a launching ramp but also a parking area, access road, incinerator, signs and landscaping.

Locations of the total of 56 ramps now built, or programmed, were chosen on a basis of the water area to be served and the number of boat registration fees collected in the area.

Funds to build the ramps come from surplus boat registration fees. In 1959 the Texas Legislature passed the Water Safety Act and designated the Highway Department as administering agency to collect boat registration fees. The act stipulated that surplus funds remaining from the program's administration would be used to build boat ramps. ■



Location of the Boat Ramps by District:

1—On Lake Tawakoni adjacent to F.M. 751, 4.3 miles south of F.M. 35

2—On Possum Kingdom Lake adjacent to Park Road 36, 2.6 miles west of F.M. 2353

2—On Lake Bridgeport adjacent to F.M. 1658, north of the dam

3—On Lake Amon G. Carter adjacent to south end of F.M. 2583

3—On Lake Graham adjacent to State Highway 24, 2.0 miles north of Graham

4—On Buffalo Lake adjacent to F.M. 168, 2.5 miles south of U.S. Highway 60

8—On Lake Fort Phantom Hill adjacent to F.M. 1082

9—On Lake Whitney adjacent to east end of F.M. 2841 in Walling Bend Park

11—On Angelina River adjacent to U.S. Highway 59, 9.3 miles north of Lufkin

12—On Intracoastal Canal adjacent to State Highway 332 at Surfside Bridge

12—On Dickinson Bayou adjacent to State Highway 146

12—On San Jacinto River adjacent to Interstate 10

12—On Clear Lake at Harris County Park near Middle Bayou adjacent to F.M. 528

12—On Colorado River adjacent to F.M. 521

13—On Intracoastal Canal adjacent to State Highway 185, 2.4 miles west of Port O'Connor

15—On Guadalupe River adjacent to Interstate 35 in New Braunfels

16—On Aransas Bay adjacent to Park Road 13 at Goose Island State Park near concession building

16—On West Bank of Nueces River adjacent to U.S. Highway 59, east of George West

16—On Lake Corpus Christi adjacent to Park Road 25 at Corpus Christi State Park near swimming area

19—On Sulphur River adjacent to U.S. Highway 67, 4.7 miles northeast of Naples

19—On Sulphur River adjacent to U.S. Highway 59, 13.6 miles north of Atlanta

20—On Cedar Bayou adjacent to State Highway 146 in Parksite

20—On Old River adjacent to F.M. Road 1409 in proposed County Parksite

20—On Neches River adjacent to F.M. 1013 at Old Sheffield Ferry Crossing

22—On Espantosa Lake adjacent to F.M. 1433, 1.7 miles east of U.S. Highway 83

22—On Nueces River adjacent to State Highway 55, 3.2 miles south of Camp Wood

23—On Lake Brownwood adjacent to Park Road 15 at Lake Brownwood State Park

23—On Lake Cisco adjacent to F.M. 2807

23—Reservoir adjacent to F.M. 2028

D-4 Survey Shows:

Accidents can be Avoided

The results of a survey of Texas Highway Department equipment losses due to accidents have been announced by the Equipment and Procurement Division.

The survey shows that replacement and repair of damaged equipment alone amounts to more than $100,000 annually.

"And many of these accidents could have been avoided," said John B. Nations, Director of the Equipment and Procurement Division.

"Less than one per cent of the reports sent in by the districts indicates that the accidents were unavoidable," he continued.

"Approximately 10 per cent of all accidents involving Highway Department equipment was attributed to other drivers running into our equipment while it was parked or working

"Another 10 per cent of these reports fails to establish where the blame for the accident lay."

Nations listed some of the reasons for accidents involving Highway Department equipment:

—Too much speed.

This is indicated in many cases when cars have gone out of control on curves or wet pavement and by reports that the driver was unable to stop in time to avoid hitting another vehicle.

—Following too closely behind other vehicles.

Reports came in from three districts in one month of our operators crashing into the rear of the car in front of them when the car slowed down unexpectedly to turn or stop.

—Quick getaway at lights or stop signs.

Several reports stated that the car in front of our operator started up as the lights changed, then slowed down, causing our equipment to plow into the rear of the other vehicle.

—Over-confidence of our operators.

Many tractor turnovers have been attributed to the operators taking too many risks on dangerous slopes and around guard rails and bridge abutments.

—Taking unnecessary risks.

Parking without setting the hand brakes and leaving the equipment in gear is an example of this. Also backing up dump trucks and loaders without first determining that the way is clear in back; and attempting to pass another driver without enough vision ahead for a sufficient distance to pass safely.

—Failure to make daily equipment checks.

Some reports show brakes failing at 7:30 a.m. at the first stop after leaving the maintenance warehouse shops. Others reflect that equipment deficiencies have caused serious accidents that might have been avoided by a close daily equipment safety check.

One example involved a broken spring shackle which is thought to have caused a fatal accident of an employe. That very morning when the truck was being greased, a closer check would have shown that the spring shackle was broken, and perhaps a fatal accident could have been avoided.

—"Cowboying" and "Jockeying" equipment.

Many foremen report that serious mechanical breakdowns and tire failures that have resulted in accidents can be traced to abuse and rough handling of Department equipment.

—Failure to yield right of way at intersections.

Numbers of the diagrams and descriptions supplied with accident reports indicate that the Department operator either failed to yield right of way or was driving too fast to stop at an intersection in time to avoid a collision.

—Failure to signal intention to stop, turn or change lanes.

Quite often other drivers involved in accidents with Highway Department equipment state bluntly that the Department operator did not give proper signals of his intentions or else gave them too late.

—Failure to observe all the common courtesies of the road while driving.

One motorist reports that he was forced off the road, wrecking his car, as a result of a Department driver passing him at high speeds on a construction detour during rainy weather. Another reports two broken front windshields within two weeks when some Department trucks cut in front of him during construction work, throwing rocks and gravel in all directions.

"We realize that with more than 13,000 units of major equipment operating over the 64,000-some miles of roadways which the Highway Department maintains that there are going to be some accidents," Nations said.

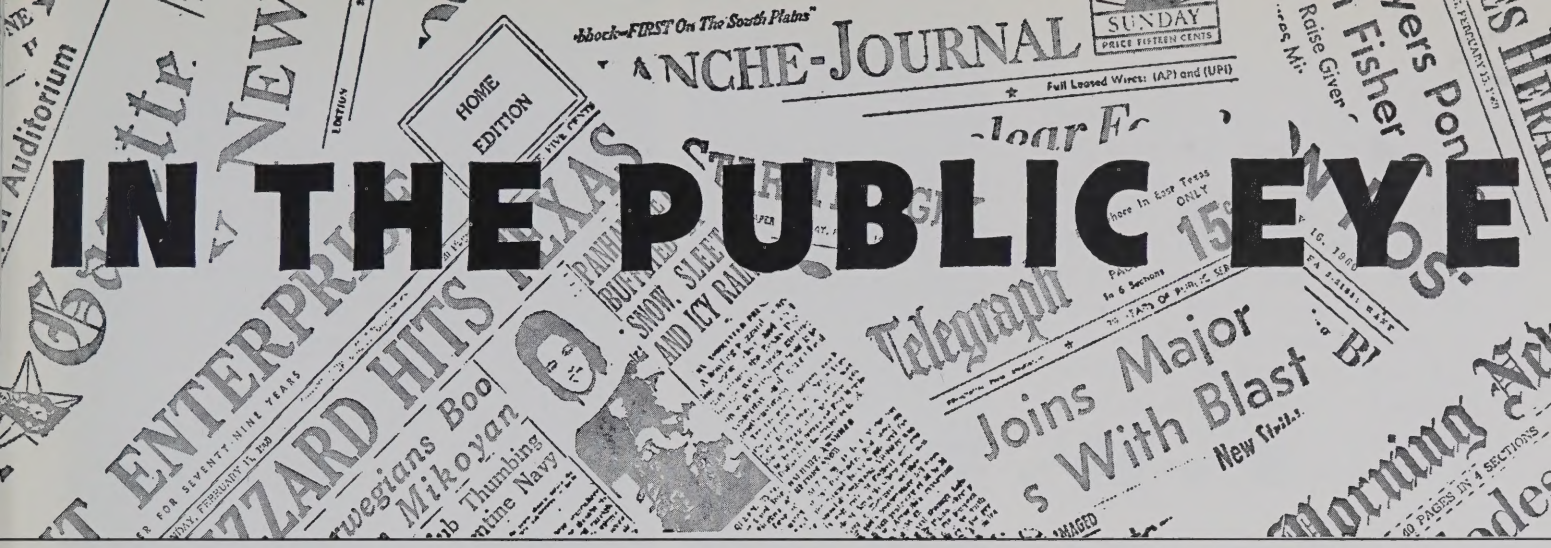
"Nevertheless, the men of D-20, our Insurance Division, constantly instruct all of our operators in every phase of safety in equipment operation. Every man within the Texas Highway Department is constantly alert and interested in the safety of all our maintenance men and operators who must be on the highways."

Nations pointed out, "So far as the driving public is concerned, you—when you are behind the wheel—are the representative of the Texas Highway Department.

"The manner in which you meet the public and the manner in which you handle your equipment is our best source of good will. The maintenance men and equipment operators are our front line of good public relations.

"The Texas Highway Department has some of the best operators, with long safety records, to be found in any state in the Union," Nations concluded. "This is something to be proud of.

"And with further close cooperation, we can further reduce our equipment losses due to accidents." ■



A NEW ATTITUDE

Fort Worth Star Telegram, with pride —"The attitude which Weatherford leaders have met the proposed by-pass of the city by a loop of Interstate Highway 20 is a far cry from the insistence heard in another era of road-building that primarily highways be routed through the business districts of towns along them . . . as good business for downtown merchants.

"Weatherford and other Parker County leaders, meeting the other day with state highway officials, properly asked for 'as many access roads as you can give us' to the proposed loop. But it was recognized that the new road, although an inconvenience to some, represented progress in road construction and the rapid movement of through traffic."

SIGNS OF FUN

Texas Mesquiter, happily bidding adventure good-bye—"Our pioneer forefathers would have sneered at the Madison Avenotion that getting there is half the fun. Adventuresome it was, but fun it wasn't.

"That same spirit of adventure has at times stalked today's freeways, but along came the highway department, posting large, easy-to-read, uncomplicated route and speed markers, and with this came a new concept in freeway travel awareness.

"Dan'l Boone tried his hatchet at route marking, and the pioneers followed his tree notches through the wilderness. As our overland trails grew to six lanes, however, other means of route marking had to be devised.

"The R. L. Thornton Freeway Highway 67 and Highway 80 markers are glowing examples of today's means to an end. Not only have they made getting there half the fun; they've made it much less than half the adventure."

THOSE MARVELOUS MAPS

Dallas Morning News, marveling—"Now that the summer vacation travel on the highways is past, many a motorist looks back with pleasure on various aspects of his trip. Certainly the fine roads to be found today in almost any direction he chooses are near the top.

"But the single most important aid to the pleasurable use of highways is something most people take for granted. It is the modern road map . . . without it as a key, the great state and national road net built at a cost of more than $500 billion would be a terrifying maze the moment most travelers range beyond the familiar precincts of their home towns . . . today, 75 million free highway maps are distributed each year.

"The free road map of today is a marvel of cartography by comparison with those of the past. Only intrepid explorers, navigators and military commanders had much use for fine maps of any kind a few centuries ago. It was not until the coming of the automobile that the great masses of people had any use for them.

"Yet the average motorist today can stop at most filling stations and pick up a map covering a state or a continent that would have knocked the eyes out of Napoleon Bonaparte, whose dependence on accurate land maps was fundamental to his conquests."

WHY WHY WHY?

Beeville Bee-Picayune, sternly—"The voters of San Patricio County defeated the bond issue for highway improvements around the city of Sinton . . . thus proving that Bee County has no corner on the market when it comes to unprogressive citizens. This was just as big a mistake as the people of Bee County made in twice defeating our own highway improvement program.

"In order for a community to have progress, there must be change . . . in communications, transportation, and industrialization, by the people themselves.

"Bottlenecks such as Beeville and Sinton do not encourage the traveller to stop, but to change to another and less congested route.

"It is difficult to understand why a small community wants to continue to be a snarl to traffic."

LET'S BUILD IT

Abilene Reporter News, expressing an opinion—"The State Highway Department proposes to build a southeast loop around Abilene, completing the system of freeways circling the city.

"Abilene is unique and most fortunate in its highway loop system. No city in Texas, large or small, has one comparable. This is a tribute to the foresightedness of the State Highway Department and Abilene citizens who know the value of good highways."

E. W. Mars Retires - Joe Battle Named New District Engineer

JOE BATTLE
. . . transfers from Houston Urban Office.

E. W. MARS, District Engineer of District 24 at El Paso for the past 13 years, retired November 14.

Joseph M. Battle, former Assistant Engineer-Manager of Urban Expressways at Houston, is the new District Engineer.

Mars had been with the Texas Highway Department for 34 years. After graduation from the University of Oklahoma in civil engineering in 1924, Mars did city engineering work and was employed by the Oklahoma Highway Department. He joined the Texas Highway Department in 1928 as Resident Engineer in Motley County. He became District Engineer of the El Paso district in 1950.

During his tenure as District Engineer, Mars saw the addition of many miles of highways to District 24, in-

This aerial view of the Clint Interchange on Interstate 10 in El Paso County illustrates how vast District 24 is, and also represents a sample of the 100 Interstate highway miles which Ed Mars saw added to District 24 during his 13 years as District Engineer.

E. W. MARS
. . . served the Department 34 years.

cluding 100 miles of Interstate highway. This includes 75 miles of continuous Interstate construction completed.

Mars worked hard to program various projects throughout the district and saw the completion of such projects as the River Road, "Camino del Rio;" the widening of U.S. 62 and 180 through the Guadalupe Mountains; and the preliminary surveys through the Franklin Mountains for the Trans-Mountain Road in El Paso.

In the district offices, Mars introduced a training program for inspection personnel, a complete reproduction laboratory that includes the new use of microfilming, up-to-date soils laboratory, a paint shop and garage, and a new maintenance building.

Mars, who took great interest in photography, instilled in his personnel an extraordinary regard for photography. He left the district well stocked with many photographs of District 24, scenic as well as informational and documentary. Mars also supervised moving films, many of which he personally photographed, edited and narrated.

L. E. Wood, District Construction Engineer at El Paso, made this statement to sum up Mars' career with the Department:

"District 24 will miss E. W. Mars when he retires. With his energetic, outgoing personality, his dry sense of humor and his devotion to his job, Mars will certainly leave his mark on District 24. He has given much time and effort to the up-to-date changes in the district, and he will be missed, and all the personnel of District 24 wish the best for him."

Joe Battle transferred from his Urban Office post to El Paso in September, becoming Assistant District Engineer. He became District Engineer on December 1.

Battle was graduated from The University of Texas in civil engineering in 1940. During college he did some part-time work for the Texas Highway Department in the Atlanta district. After graduation he returned to the Department as a rodman, advancing to Junior Resident Engineer in the Atlanta and Houston districts.

In 1945 he transferred to the Houston Urban Project as Resident Engineer, Senior Design Engineer and Supervising Design Engineer.

He became Assistant Engineer-Manager in 1955. ■

One of the projects completed during Mars' service was the scenic El Camino del Rio, the River Road. The road received honorable mention as one of the country's most beautiful roads in the 1962 National Scenic Highway Award Contest. The road traverses the rugged country along the Rio Grande from Lajitas to north of Presidio.

Farewell to Bumpy Tires

YEARS AGO, when Texas Highway Department equipment featured rigid axles, stiff springs, and no shock absorbers, vehicle passengers could scarcely tell whether the tires were egg-shaped or unbalanced.

But today, on Texas' smooth modern highways, the same passengers practically wince and groan when a tire passes over a peanut.

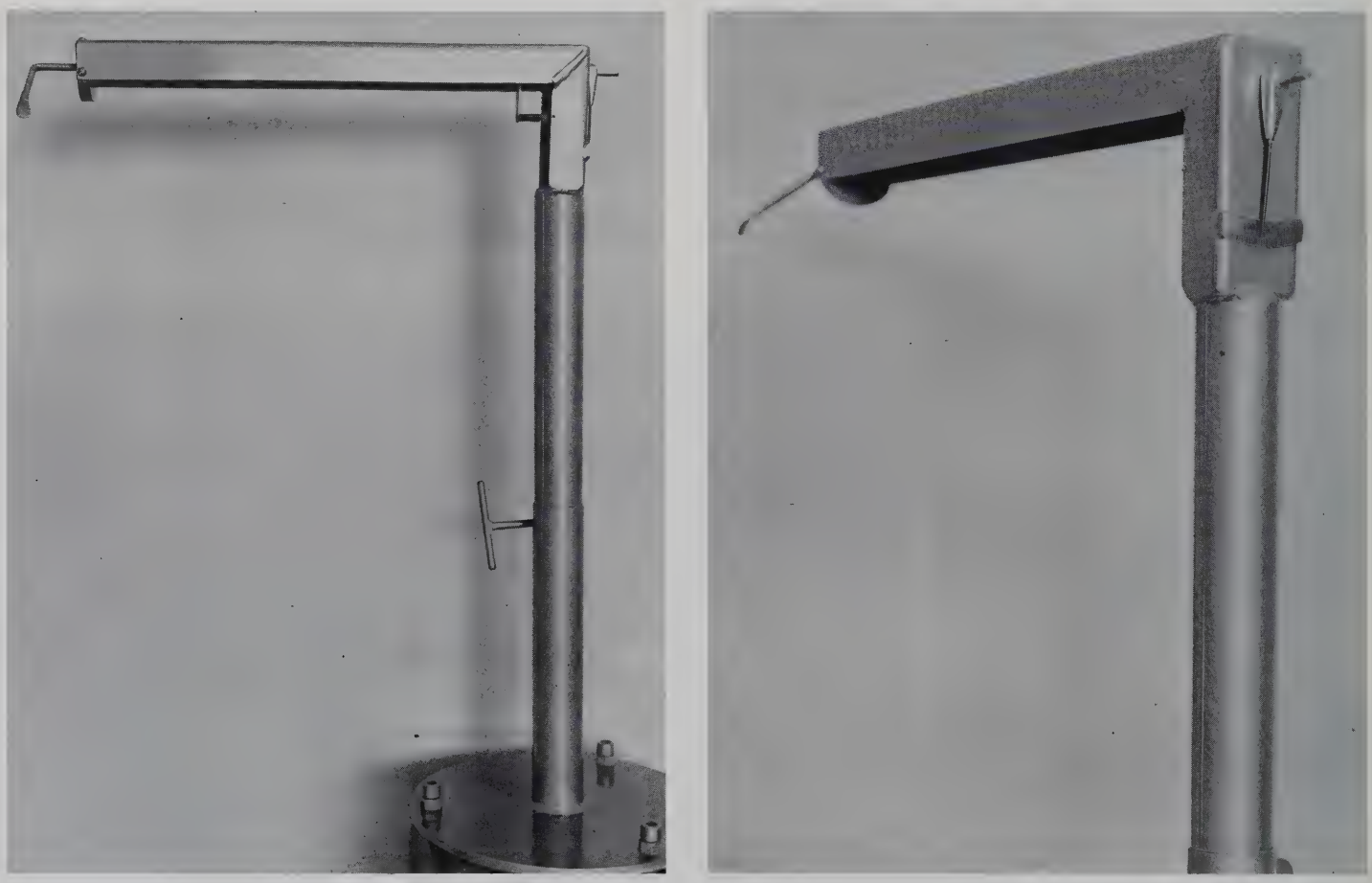
Hence, since the beginning of its Tire and Equipment Preventive Maintenance Program back in 1957, the Equipment and Procurement Division has sought for a simple and inexpensive gauge which the districts could use for checking out-of-round and run-out in Department tires and wheel assemblies.

The research was begun by checking with the wheel alignment manufacturers, who suggested their wheel balancing equipment. The balancers and wheel stands did indeed indicate when tires had high spots and in some cases wobbled due to wheel run-out, but still there was no accurate means of measuring *how much.*

So D-4 decided to design its own device. And as of mid-November, such devices had been designed and found to be just what had been needed all along, and were on their way to all the districts.

D-4 Draftsman Carlyle Wall Jr. at the Camp Hubbard shops did the basic work on the new device. After searching about, he located an old run-out gauge in an Austin brake and wheel shop. He transformed it into an out-of-round precision gauge.

The gauge is a simple upright standard, about 22 inches tall with a right angle arm welded onto it about 15 inches long. Enclosed in this arm is a spring-controlled steel rod mounted



Here is a two-way view of the new gauge developed by the Equipment and Procurement Division to measure out-of-round and run-out in tires and wheel assemblies. To the left is the depressor, which fits into the center rib of the tire as it is revolved slowly to detect out-of-round. To the right is the indicator and gauge which shows the amount of out-of-round.

on bearings. At one end of this rod there is a three-inch depressor which contacts the center of the tire tread when the whole wheel assembly is raised off the ground. On the other end of the steel rod there is a three-inch indicator which shows a calibrated marker the amount of out-of-round in the tire as it is revolved slowly against the depressor.

With the aid of automobile and truck manufacturers and national fleet operators, D-4 personnel set up industry-accepted tolerances which are allowable in Department tires before they are taken off and returned to the manufacturer for adjustment. If a tire is too badly out-of-round, or if one is found which cannot be balanced satisfactorily dynamically, the Department's new tire specifications call for replacement of such tires by the Department's contractors. ■

Tire Standards

These are the Texas Highway Department's established maximum allowable tolerances for out-of-round in tires of different size groups and run-out in tire and wheel assemblies:

1. Out-of-round (eccentric) tires that have a high spot of more than 3/16-inch in passenger tires and light trucks through Size 7.50 x 17, or more than 5/17-inch on larger truck tires, should not be put into service. Department service men should mark the high spot or spots on the tire tread and sidewall with tire marking chalk and return the tire to the manufacture for adjustment. District Warehousemen are familiar with the necessary procedure in handling.

2. Run-out should not exceed 1/16-inch on passenger tire and wheel assemblies; 1/8-inch on front truck wheels; and 3/16-inch on rear truck wheels and dual assemblies. In many cases on dual wheels run-out is due to loose or improperly tightened stud nuts. To correct this, lightly loosen all the stud nuts; then tighten the top nut only to snug; Next, drop down across the bolt circle to the bottom nut and pull it up to snug and then alternate back and forth across the bolt circle until all are pulled up snug. Then start the tightening process in the same sequence of opposites instead of adjoining nuts. Bent or irregular shaped wheels that have more than 1/16-inch run-out on trucks up to and including one-ton models, or wheels that have more than 1/8-inch run-out on trucks from $1\frac{1}{2}$ tons and larger should be straightened or replaced.

3. All of the Department's new district shops have wheel aligning and wheel balancing equipment and are familiar with its operation. Proper alignment and balance adds life to tires, wheel bearings, and bushings, as well as taking much wear and tear off chassis, bodies, and the aching backs of Departmental operators.

THIS IS HOW A TIRE IS MADE

Most tire manufacturers agree that they find it practically impossible to produce a perfectly round and perfectly balanced tire. Cured out as they are under heat and pressure and tightly encased in steel molds, a small percentage of new tires may develop elliptical or eccentric shapes when the vulcanization process is completed. Still others may develop slightly heavy spots due to cord-body overlaps, butt splices of the tread stock, or light depressions in the cord-body, which accumulate more rubber than other points.

Contrary to popular belief, Department tires are not "gum dipped" in boiling hot rubber to acquire their treads. Rather, a tire is built up by first placing the cord-body or "casing" over a flat surface steel drum or cylinder of the proper circumference, generally two plies at a time, with alternate plies running at a 45-degree angle opposite to each other. The steel wire beads are then tied in by "flipper strips" extending from the edge of the cord fabric.

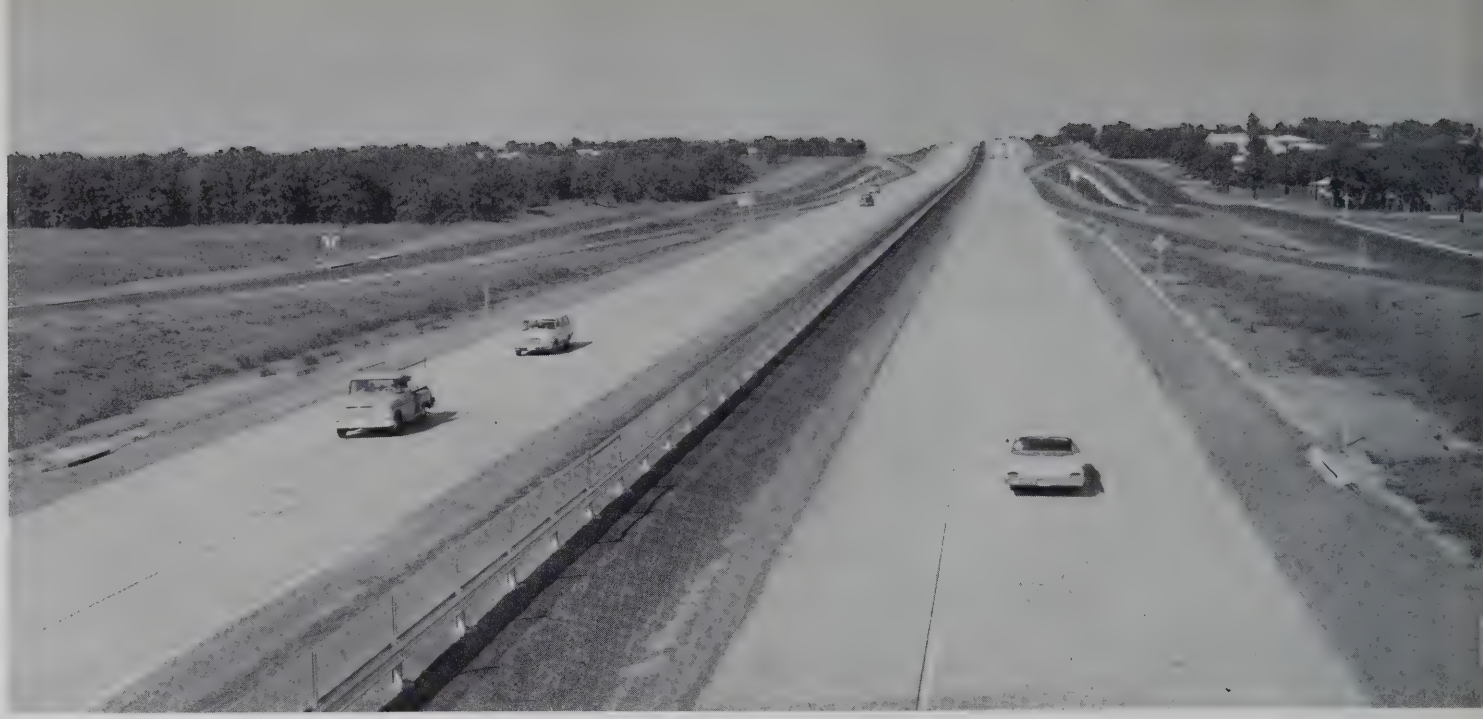
Next, the tread rubber is applied and it is here that the splice occurs where the two ends of the rubber meet. Then the sidewall rubber is applied and the tire comes off the building drum and is ready to go to the bagging room. Here the tire is collapsed from its round, wide flat shape and assumes the appearance of the tire as we see it on our cars. The curing bags are inserted and the tire moves on to the curing molds.

The definition of vulcanization is heat . . . plus pressure, plus time. An average of 300 degrees Fahrenheit heat in the mold and the equivalent of 65 pounds of steam pressure inside the curing bag in the tire is required to cure the tread rubber to the cord body.

Actually, rubber starts to flow at about 293 degrees, but recappers attempt to keep about 300 degrees on the gauges outside the molds because of loss in the mold walls and the matrix or shell inside the mold which gives the tire its tread design. As to time, about five minutes per 1/32 of tread thickness, or 60 to 70 minutes on the average passenger tire is required. On the Department's large grader tires which require 24/32 to 28/32 of tread rubber, about seven minutes per 1/32 is necesesary, which means that several hours of curing time are needed.

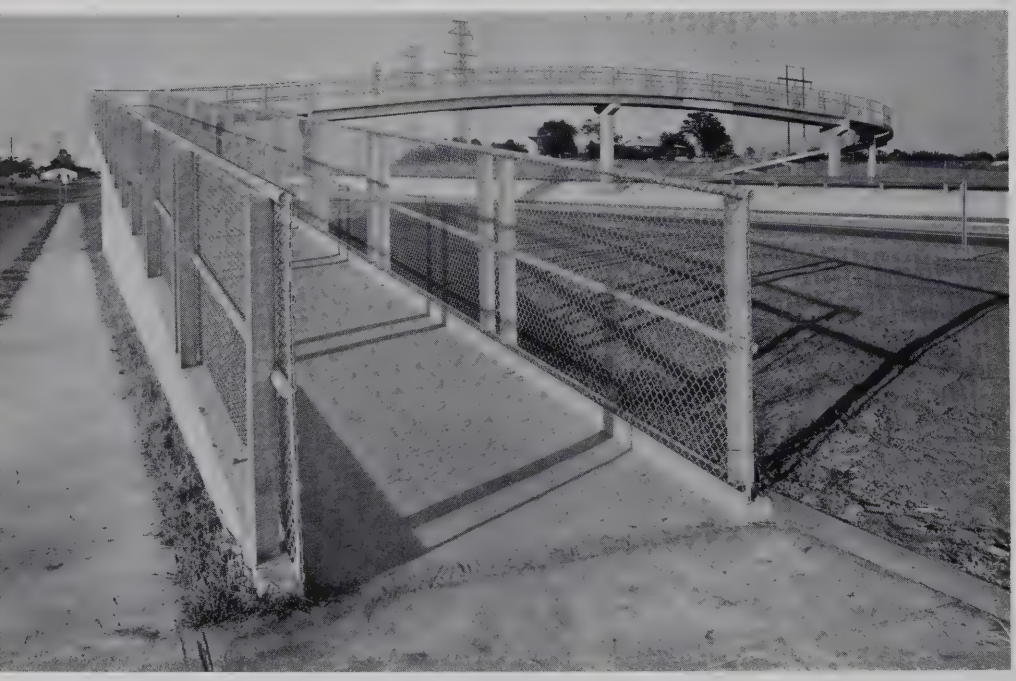
With the advent of tubeless tires, smaller diameter tires (which are harder to build) and the increased flexibility of our front end suspension systems (which the public demands for more riding comfort) the out-of-round tire and the out-of-balance tire have become even more of a problem.

But with the development of the Department's new out-of-round precision gauge, out-of-balance tires are now a problem that can be solved. ■



This shows the 7500 L.F. metal beam guard fence barrier installed on the project to help reduce headlight glare and to help prevent cars from crossing into opposing lanes of traffic. This view is looking north from the Meadowbrook Drive overpass.

Fort Worth Dedicates New



The Greenlee Street pedestrian overpass is the only pedestrian overpass on the project.

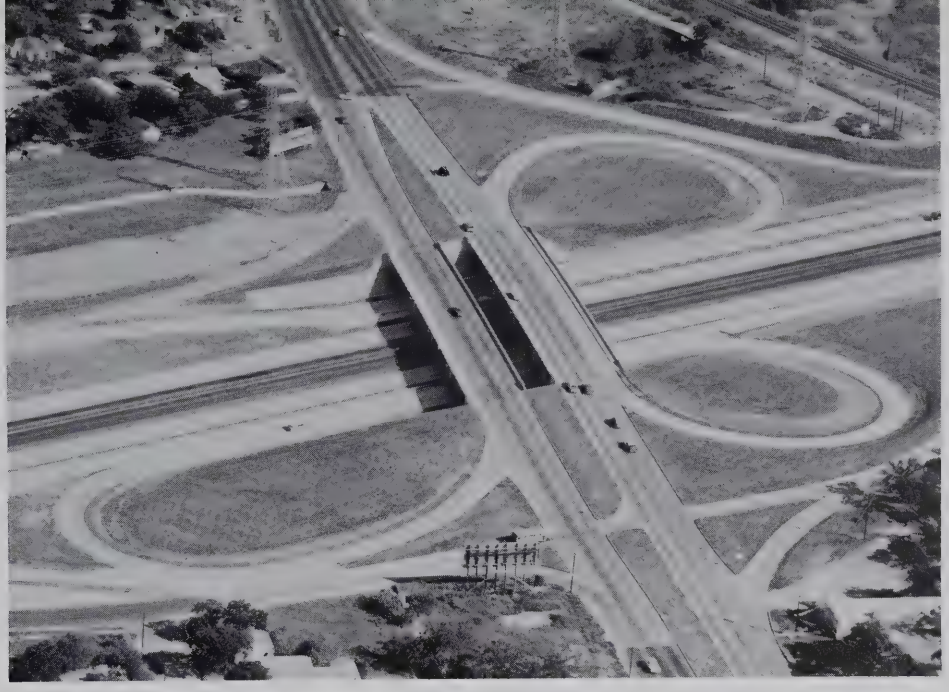
A 10.6-mile portion of Interstate Highway 820 was dedicated at Fort Worth in District 2 in September. Stretching north from U.S. 287 to State Highway 183, the new link is the longest section of freeway ever opened in a single unit in the Fort Worth area.

The segment was built at a cost of some $12,000,000, of which $2,800,000 went to purchase right of way.

With its completion, the new portion filled in the gap to make a loop that runs from near the western edge of Fort Worth across the southern part of the city and north to a junction with S.H. 183 in Hurst. Although Interstate 820 will continue farther north, a loop is made now by the use of S.H. 183 across the north and west parts of Fort Worth.

The route also serves North Richland Hills, Richland Hills, Haltom City,

R. W. Crook, District Engineer at Fort Worth, participates in the dedication of the 10-mile section of I.H. 820.



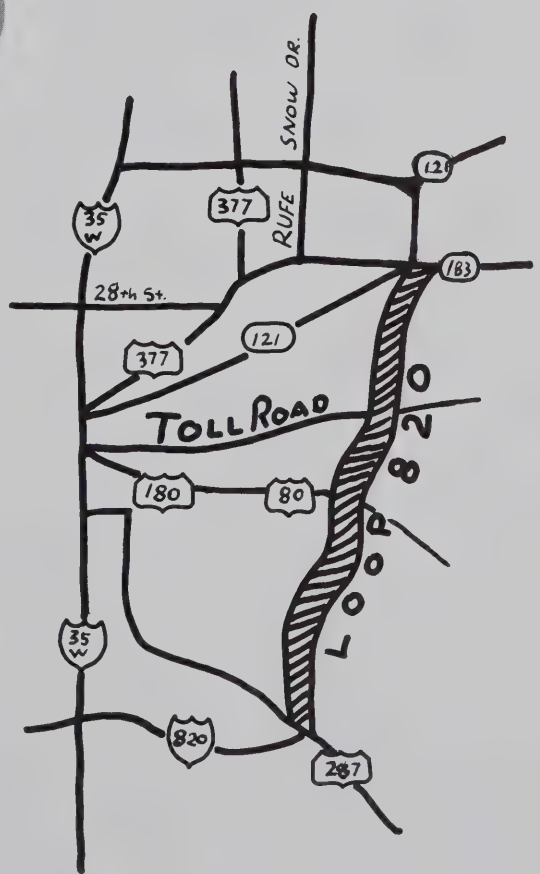
The fourth loop of the cloverleaf was not provided at this I.H. 820 and U.S. 80 interchange because of the anticipated low traffic volume. The northeast quadrant loop would have moved northbound I.H. 820 traffic west toward the Fort Worth business district; however, U.S. 287 about two miles back to the south provides a freeway connection to downtown Fort Worth.

Section of I.H. 820

River Oaks, Westworth and White Settlement, which makes the new stretch of highway important because it, by helping form the loop, contributes to a closer relationship of these communities by providing a new and convenient traffic link.

The new section begins at the southeast turn of the loop, at the junction with U.S. 287. It passes within sight of Lake Arlington and passes through some open territory, giving more reason for development of these open areas.

Officiating at the dedication were representatives from the Texas Highway Department; city officials from Hurst, Richland Hills, North Richland Hills, Arlington and Fort Worth; the turnpike authority, and Tarrant County commissioners. R. W. Crook is District Engineer at Fort Worth. ■



The cross-hatched lines show the new section of I.H. 820 which is now open to traffic. From S.H. 183 to Rufe Snow Drive, the I.H. 820 route is still under construction. The contract for work on the route from Rufe Snow Drive west to I.H. 35W was let in November. I.H. 35W is under construction from 28th Street north to Denton. S.H. 121 is in various stages of development from I.H. 35W to Grapevine.

The Dallas-Fort Worth Turnpike crosses over the new section of I.H. 820. In the background is the John T. White overpass.

Also attending the I.H. 820 dedication were, left to right, Harrison D. Swilley, Resident Engineer; Charles McMenemy, Engineering Assistant I, and Jack Bostick, Manufacturing Process and Plant Inspector, both of Materials and Tests Division; and A. G. Taylor, Resident Engineer in charge of the project, all of Fort Worth.

Here the Trinity River structure and relief structure is shown.

Chatting after the dedication are J. R. Stone, District Administrative Engineer, left, and J. M. Bingham, Assistant District Engineer, both of Fort Worth.

This portion of I.H. 820 was under construction between S.H. 183 and 0.5 mile west of Rufe Snow Drive at the time of the dedication. The construction in the upper right is future S.H. 121 interchange. S.H. 121 will serve the Hurst, Bedford, Euless and Grapevine areas.

This is the north end of the I.H. 820 project. The interchange with S.H. 183 will be completed on the project underway to the north. The center structures cross the Rock Island Railroad. The structure on the right roadway between the railroad on S.H. 183 is for future S.H. 121 which will connect to I.H. 35W near Fort Worth's central business district.

Looking southwest at the south end of the project, U.S. 287 passes under Interstate 820. The large bow to the left was provided to conform to future interchange needs.

The Santa Claus Minute

In 1897 The New York Sun published the famous editorial (below) assuring Virginia O'Hanlon that there is, indeed, a Santa Claus. The staff of Texas Highways got to thinking about it . . . "Play like," one of them said, "Virginia had written the Texas Highway Department for its ideas on Santa Claus."

Is There a Santa Claus ?

By Francis P. Church

We take pleasure in answering at once and thus prominently the communication below, expressing at the same time our great gratification that its faithful author is numbered among the friends of The Sun:

Dear Editor:

I am eight years old.

Some of my little friends say there is no Santa Claus.

Papa says "If you see it in 'The Sun' it's so."

Please tell me the truth, is there a Santa Claus?

Virginia O'Hanlon
115 W. 95th St.
New York City

Virginia, your little friends are wrong. They have been affected by the skepticism of a skeptical age. They do not believe except what they see. They think that nothing can be which is not comprehensible by their little minds. All minds, Virginia, whether they be men's or children's, are little. In this great universe of ours man is a mere insect, an ant, in his intellect, as compared with the boundless world about him, as measured by the intelligence capable of grasping the whole of truth and knowledge.

Yes, Virginia, there is a Santa Claus. He exists as certainly as love and generosity and devotion exist, and you know that they abound and give to your life its highest beauty and joy. Alas! How dreary would be the world if there were no Santa Claus! It would be as dreary as if there were no Virginias. There would be no childlike faith, then, no poetry, no romance to make tolerable this existence. We should have no enjoyment, except in sense and sight. The eternal light with which childhood fills the world would be extinguished.

Not believe in Santa Claus! You might as well not believe in fairies! You might get your papa to hire men to watch in all chimneys on Christmas Eve to catch Santa Claus, but even if they did not see Santa Claus coming down, what would that prove? Nobody sees Santa Claus, but that is no sign that there is no Santa Claus. The most real things in the world are those that neither children nor men can see. Did you ever see fairies dancing on the lawn? Of course not, but that's no proof that they are not there. Nobody can conceive or imagine all the wonders there are unseen and unseeable in the world.

You tear apart the baby's rattle and see what makes the noise inside, but there is a veil covering the unseen world which not the strongest man, nor even the united strength of all the strongest men that ever lived, could tear apart. Only faith, fancy, poetry, love, romance, can push aside that curtain and view and picture the supernal beauty and glory beyond. Is it all real? Ah, Virginia, in all this world there is nothing else real and abiding.

No Santa Claus! Thank God he lives, and he lives forever. A thousand years from now, Virginia, nay ten thousand years from now, he will continue to make glad the heart of childhood.

Texas Highway Department
Form 330-B 8-53-2m

MINUTE ORDER

Various Counties Page 1 of 1 Pages

District No.

WHEREAS, in FLATBUSH, hearings and discussions have been held between Miss Virginia O'Hanlon and sundry members of her family relative to the actuality of Santa Claus; and

WHEREAS, after due deliberation Virginia's father recommended that she request the assistance of the Texas Highway Department in developing preliminary data pursuant to resolution of the child's dilemma; and

WHEREAS, through appropriate channels, Virginia solicited such assistance;

NOW, THEREFORE, IT IS ORDERED, that SANTA CLAUS be and is hereby designated as the symbolic instrument for the implementation of the Christmas Spirit in Virginia O'Hanlon's family, an aggregation of approximately 3.0 persons; and it is further ordered that the following policy be adopted as to the existence of the aforementioned Claus subject to the concurrence and compliance of the conditions outlined herein by appropriate members of Miss O'Hanlon's family and affected entities:

1. In the absence of conclusive evidence to the contrary, it is concluded on empirical, intuitive, ontological and epistemological grounds that there is a Santa Claus.

2. Inasmuch as the CHRISTMAS MOUNTAINS are situated in the vicinity of the junction of State Highway 118 and Farm to Market Road 170 in BREWSTER COUNTY, a distance of approximately a prodigious number of miles, it may be deduced that Santa Claus is particularly actual in Texas, governing policies and regulations of the Department not withstanding.

3. This policy abrogates, supersedes, cancels, preempts and rescinds all other statements on the question of Santa Claus, and it is ordered that skeptics and older children shall have no recourse to this dictum.

This Order is subject to acceptance by Virginia O'Hanlon and other children who may be involved and if not accepted within 90 days of the date hereof, the actions herein contained shall be automatically cancelled by reason of cynicism.

Submitted by: The Staff

(Title) TEXAS HIGHWAYS

Examined and recommended by:

Approved

State Highway Engineer

Approved:

Commissioner

Commissioner

Commissioner

Minute Number

Date Passed December 25, 1963

19

Note: This form is to be submitted in quintuplicate.
85002-853-2m

AWARDS

40 Years

District 9
Coran L. Law, Skilled Laborer
District 20
Joe P. Fuller, Maintenance Construction Superintendent

35 Years

D-5
Henry M. Taylor, Senior Office Engineer
D-15
William B. Averyt, ROW Administrative Engineer
D-21
Fred D. Lee, Semi-Skilled Laborer
District 4
James L. Payne, Right of Way Agent III
District 9
John E. Brewer, Maintenance Construction Supervisor II
John J. Pollock, Maintenance Construction Foreman II
District 11
Johnnie J. Potts, Skilled Laborer
District 17
Edward F. Mahlmann, Skilled Laborer

District 19
Roy C. Johnston, Maintenance Construction Superintendent
District 23
Raymond E. Brookshire, Maintenance Construction Foreman III

30 Years

District 1
Joseph L. Soward, Engineering Assistant I

District 2
Joseph M. Bingham, Assistant District Engineer
District 6
Miguel M. Tercero, Utilityman
District 9
Curtis H. Lipsey, Inspector III
District 14
William E. Thompson, Engineering Aide IV
Benjamin W. Kunz. Skilled Laborer
District 18
Richard E. Gilder, Shop Foreman II
Walter A. Harper, Supervising Resident Engineer
District 21
Fidencio Olvera, Skilled Laborer
District 23
Jody B. Crutchfield, Engineering Aide IV

25 Years

District 1
Leon C. Steelman, Skilled Laborer
District 6
Alberto S. Hernandez, Skilled Laborer
District 8
Morris W. Nixon, Skilled Laborer
District 11
Allen L. Freeze, Inspector II
District 15
Harry L. Alexander, Inspector III
District 24
William A. Freeman, Skilled Laborer

RETIREMENTS

District 1
Raymond A. Graves, Skilled Laborer
George A. Henderson, Assistant Fiscal Officer
Robert Skidmore, Skilled Laborer
District 5
William D. Birdsong, Skilled Laborer
District 7
William S. Cunningham, Skilled Laborer
District 9
Thomas F. Lee, Skilled Laborer
John W. Nichols, Maintenance Construction Superintendent
District 10
William D. Harris, Senior Resident Engineer

District 11
Johnnie J. Potts, Skilled Laborer
District 12
Patton H. Caldwell, Right of Way Agent II
Andrew Tacquard, Skilled Laborer

District 15
Andrew S. Germer Jr., Semi-Skilled Laborer
District 17
Hubert W. Dyess, Maintenance Construction Supervisor II
Albert J. Weber, Skilled Laborer
District 20
Herbert H. Smith, Skilled Laborer

A Maintenance Construction Foreman Reminisces

Russell A. Reeb, Engineering Assistant I
Corpus Christi, District 16

Leonard M. Mahoney, Maintenance Construction Foreman for Jim Wells County in District 16, has an enviable safety record. During his 34 years with the Highway Department, he has driven all types of state vehicles for 908,000 miles without an accident.

Leonard M. Mahoney, Maintenance Construction Foreman for Jim Wells County in District 16, has seen many changes in the Texas Highway Department's operations during the 34 years he has been with the Department . . . especially in the method of painting center stripes on the highways.

"I helped put down about the first center stripe in Jim Wells County," reminisced Mahoney.

"That was on what is now U.S. 281 from Alice south to Falfurrias . . . evidently including a portion of Brooks County.

"The stripe machine was mounted on a push plow frame and consisted of a five gallon paint bucket with a spigot and hose leading down to a four-inch brush adjusted against the pavement," he continued.

"The men would take turns pushing this 'machine' from point to point on the highway, the points being an iron bar driven into the center of the pavement by the alternate pusher."

This, Mahoney pointed out, is quite a contrast to the machinery used to paint stripes down the highways today.

Two-ton trucks that can hold 300 gallons of paint and 1,800 pounds of beads are used to stripe the highways throughout Texas now. The trucks are equipped with 3-gun trail type stripping devices. Two guns are for yellow paint and one is for white paint. They stripe from five to 15 miles per hour. The Department owns 30 such stripping trucks.

Mahoney first joined the Department as a Caterpillar operator in Brooks County in 1929. He transferred to Alice in 1931 and has worked there ever since. He was paid 50 cents an hour, the top wage of skilled labor at the time.

"The depression came soon after I was hired," Mahoney recalled. "For a time in the early 1930s the hourly wages of the Department employes were reduced to 40 cents."

Before the Texas Department of Public Safety began assigning highway patrolmen to the counties, it was the Highway Department's responsibility to investigate wrecks and keep the highway cleared as well as maintaining the roads.

Mahoney remembers a wreck that closed the highway near the Brooks County line in 1936 in an unusual way.

"A truck pulling a trailer went out of control, overturned and dumped 20 tons of cottonseed on the road. It took three other men and me four hours working with scoops to remove the cottonseed that blocked traffic," Mahoney recounted.

When Mahoney started to work for the Department, it had only 6,000 miles of roads. Now it has more than 64,000 miles. Jim Wells County had 67 miles; now roads reach out to every section of the county.

"The first farm to market road in Jim Wells County was F.M. 625 built in 1946," said Mahoney.

"It was the beginning of an F.M. system that links almost all the rural areas in the county with Alice and through highways. Very few farmers or ranchers in the county live more than a half mile from a hard surface road."

During his 34-year tenure in District 16, Mahoney has achieved an enviable safety record. He has driven 908,000 miles on the job without an accident. ■

An Overall Outlook

To free the young engineer from the claustrophobia caused by the narrow specialization demanded in modern times, the California Division of Highways in 1957 instituted a unique program for junior civil engineers, the beginning level for graduate engineers. A primary goal of the program is to provide the public with highway leadership in the future.

Upon going to work for the division, each "junior civil" is placed in a rotation program which includes: six months in design, eight months in construction, four months in surveys . . . preliminary and construction stake-out, and a final six-month period in a fourth phase of highway work. A report is made on his performance in each phase, indicating assignments completed, employe's progress, and a future schedule. He gets a copy of each report, as does the headquarters office.

At the end of the two-year program, the junior civil can expect to look back on two principal accomplishments: (1) he has demonstrated what specialty he can do best, and (2) he has gained some first-hand familiarity with the scope of highway work. Then he steps into his first permanent assignment.

A Litterbug Un-Litters

One day last summer if you traveled west on State Route 112 near Tooele, Utah, you would have seen a youth cleaning up all sorts of debris from the side of the highway, observes the Utah **Highways and Byways.**

A Highway Patrolman had spotted the boy littering the highway from his car, and took him before the Tooele County Justice of the Peace, S. W. Clarke. Clarke decided the boy would have to work off his fine by cleaning up a section of the highway.

The Utah State Department of Highways provided the truck and driver for the day so the boy could carry out his chore.

The First Time

For the first time in the nation, combination highway-recreation projects will be built as part of the Interstate system, reports **Public Works** magazine.

Two dams will be built on Interstate 94 in western North Dakota to serve the dual purpose of providing a highway and impounding reservoirs to create two local recreational areas.

A bridge and a reinforced concrete box were planned at first, but through cooperation between the North Dakota Highway Department and several other agencies, including the State Game and Fish Department and the State Water Conservation Commission, it was decided to build dams instead. The Bureau of Public Roads will participate in the usual 90-10 Federal matching formula in the cost that would have been required to provide the normal bridge crossings. The Highway Department will proceed as usual for normal highway projects, while the other agencies will bear the added cost of the dams.

It Isn't Easy

The Russians have intricate traffic rules, even though traffic is extraordinarily slight by U.S. standards . . . and to get a license is not easy.

This means, among other things, that the foreign embassies are dependent in the main on Soviet chauffeurs. Very few Americans in Moscow have ever passed the Soviet driving test. Among other things you have to be approved by a **panel** of physicians, not merely one, including an eye doctor, a cardiologist, a back specialist, and one who tests reflexes in the soles of your feet. You have to work out traffic problems with model cars on something that looks like a parchesi board, and prove that you can take apart and mount an engine.

Traffic accidents . . . for anybody . . . are a very serious matter, and offenders are punished with severity. Even if you scrape somebody's fender

you can lose your license for a year, and if you accumulate three violations you lose it for **life.** In the interests of safety, no more than two persons are permitted on the front seat. Late in 1956 two hospital workers in Podolsk got drunk, ran off with an ambulance, and went on a joyride with their wives. The ambulance hit a bus, and later knocked down and injured two pedestrians. The ambulance driver abandoned his vehicle, and ran away. He was caught, and was sentenced to 25 years in jail.

Colored Pavements

Red, green and amber pavements have been applied to a busy intersection near Richmond in an experiment conducted by the Virginia Highway Department, reports the **Highway User.**

Special mixes containing the new colored binders were developed and applied at the junction of U.S. Route 1 and Route 161. A warning area of about 300 feet on the northbound lane of Route 1, approaching the intersection with Route 161, was paved in amber indicating the need for motorists' caution. The intersection was paved in red, identifying it as the area of potential traffic hazards, and the northbound lane beyond the intersection has a green pavement, indicating the area of safety.

Michigan Wins First Place

The state of Michigan's Interstate Highway 75 won first place in the 1963 Parade Scenic Highway contest. Running 22 miles from Vanderbilt to Indian River, it is part of the expressway network from Toledo to Mackinac. The four runners-up were I.H. 93, New Hampshire; I.H. 84, Connecticut; State 279, Utah; and I.H. 405, California. Texas was one of 15 honorable mention awards chosen from some 300 entries.

Automated Map Reading

The Pennsylvania Highway Department in October became the first in the country to automate its map-reading and recording work.

Now every bridge, slope, culvert, and turnpike in the state comes under the electronic eye of a new machine known as ECARS, Electronic Coordinatograph and Recording System. The machine can look at maps, charts, photos and drawings, and then translate what it sees into computer language on punched cards, magnetic tape or paper tape. The computer stores thousands of elevations, distances and related facts so gathered into its memory banks, where the information is almost instantly accessible when needed. Highway Department officials report that work that once took months can now be done in days.

The new system complements the Department's existing data-plotting equipment used to draw maps automatically from punched cards.

School Days

In September when school doors opened again, the **New Mexico Highway Happenings** cautioned: "Approach every school as you did when you were a child—Slowly!"

for moisture-density measurement

TEST HOLES

James F. Todd, Senior Laboratory Engineer
Austin, District 14

Digging holes in compacted flexible base for measuring density by the conventional method generally is considered an easy chore. Yet if the amount of digging for an entire project is considered, it could be a very time consuming chore.

As an example, on 13.2 miles of Interstate work we have dug 1,139 holes to date. Assuming these holes average six inches in depth, this represents a hole six inches in diameter and 569½ feet deep. This also would represent six tons of material. To dig six tons of compacted flexible base out of a six-inch diameter hole with a ¾-inch chisel and a 1½-pound hammer requires a lot of work.

Considered in this light, digging density holes is a mammoth job. On an average, one man can dig eight to 10 density holes a day with actual digging time being approximately 20 minutes to the hole. Based on the time involved to dig the necessary density holes on a large project, a small saving per hole would represent many man hours.

For some time a quicker method of determining moisture and density on base materials has been desired. Nuclear testing is being tried and evaluated, but primarily density in Texas is measured with one of the conventitonal methods and all of these require digging a hole. The most commonly used conventional method in Texas is the volumeter. This is merely a device which utilizes a balloon and water to measure the volume of the hole.

The particular nuclear machine used by District 14 requires that a small hole be drilled or punched in the material to be measured. To speed the hole drilling for the nuclear device, we purchased a small generator and electric hammer. In an effort to utilize the generator and hammer to a greater extent, C. L. Williams, Material Analyst II, and B. W. Hickman, Material Analyst III, made a chisel to work in the electric hammer and used the hammer and chisel to dig volumeter holes.

Digging holes with the electric hammer is equally as good as digging by hand and it is much faster. In a hard, firmly compacted, limestone base a hole can be dug with the hammer easily in 10 minutes. This represents approximately half the time that it takes to dig the hole by hand.

There are other factors to be considered, however. Not only is the hammer faster but the work involved virtually has been eliminated. This alone should increase a man's efficiency, in that on a hot July day he would just naturally dig more holes if the work had been eliminated. A safety factor should be considered also. There have been cases when thumbs and fingers have been mashed and injured by a glancing blow when digging by hand. In addition to this equipment being safer and faster to use, it is portable and one man easily can carry the generator and hammer at the same time.

The cost of this equipment is small compared to the time saved in digging by hand. The generator costs $188 and the hammer costs $135. Figured only on the time saved in digging the holes, this equipment can be paid for on one large project.

There are other possibilities that can be investigated. It would be possible to attach a battery to the hammer and

C. L. Williams, Material Analyst II, digs a volumeter hole by hand.

In contrast, Material Analyst III B. W. Hickman does the same job more quickly by digging the volumeter hole with an electric hammer.

This shows the completed hole, and the chisel which was designed to be used with the electric hammer.

Hickman measures the volume of the hole with the volumeter, which utilizes a balloon and water to measure the volume of the hole.

eliminate the generator. This would involve possibly two batteries . . . one to be in use and one to be recharged daily.

It is admitted that the greatest stumbling block to the conventional method is the time involved in getting the moisture content. Yet a saving in the time it takes to dig holes would either represent a saving in man hours, or it would allow more density readings to be taken with the same personnel. We have always thought it more desirable to take many more density readings than we are now able to run. This easier and faster way of digging holes can be one aid in securing more densities. ■

F. M. PROGRAM EXPANDED

The Texas Highway Commission has approved an $18,144,500 program to improve the safety factor and protect the state's investment on 3,056 miles of farm to market roads.

The action spotlights one of the most extensive farm to market construction and improvement programs in many years. At the same time it emphasizes the Commission's concern with reducing driving hazards in the farm to market road complex as well as on multi-lane arterial systems.

Although the dollar value of the program is not greatly in excess of the $18 million-plus spent a year ago, more of the funds allocated will be used for reconstruction and reconditioning of existing roads and upgrading the safety factor. Some 67 per cent of the total allocation will go for this purpose.

The Commission stressed the need for meeting the demands of greater traffic volume and heavier load requirements of farm to market roads. When many of the older farm to market roads originally were built, demand for stronger bases, wider traffic lanes and thicker surfacing was not so great.

Besides protecting the state's investment in its farm to market system, the new program is aimed at incorporating safety features to meet the demands of modern-day traffic. The program will include the widening of culverts, channelizing of traffic at intersections and other engineering projects which will further contribute to motoring safety.

Work is proposed on 524 projects.

Some 335 miles of farm to market roads will undergo complete reconstruction, grading, and surfacing with the addition of new, wider bridges. This will represent more than $8.7 million of expenditures and approximately 48 per cent of the total.

Some $3.5 million more will be spent for widening pavement, widening shoulders and resurfacing an additional 521 miles, representing 19 per cent of the total farm to market road expenditures in the 1964 program.

Also scheduled are new, wider drainage structures and approaches estimated to cost $1.7 million, representing nine per cent of the total allocation. Remainder of the allocation will be devoted to projects protecting the state's ¾-billion dollar investment in its farm to market roads program by adding additional surfacing, seal coat, shoulder repair and sodding. ■

To and From Our Readers

The First and Last Time

C. B. Thames, District Engineer of District 17 at Bryan, sent in a rather humorous letter.

The letter was sent in reply to a letter which Thames had written to a San Antonio gentleman who had driven over and demolished a highway barricade where some road repair was being done. The Highway Department sought reimbursement for the ruined barricade, and cautioned the gentleman to be more careful in the future.

And here is the frankly put letter Thames promptly received:

"Am in receipt of your letter and in compliance with your request am enclosing my check for the amount named.

"It would be impossible for me to try to explain the cause for what happened. I think I was as much surprised as the men working, and would not have known what to say if I had stopped, so just kept going after I was sure no one was hurt. It was the first and I promise you the last time anything like that will happen."

TTI Announces Changes

Charles Pinnell, former researcher at the Texas Transportation Institute, has been named Head of the Highway Design and Traffic Engineering Department of the Institute. He has replaced Charles J. Keese, who is now executive officer of the TTI.

PAUL HANCOCK
. . . new TPEA president.

Hancock Heads TPEA

Paul S. Hancock, fiscal officer for the Equipment and Procurement Division in Austin, has been installed as the new president of the Texas Public Employes Association.

He succeeds James W. Morris, supervisor of general stores for the Department of Public Safety.

Hancock has been with the Highway Department since 1938. He served in Paris in District 1 before transferring to Austin.

Texas Public Employes Week was observed November 3-9, honoring Texas' 40,000 public employes.

What's in a Name

What's in a name? Many things. And many stories lie behind names, too.

Take O. F. Garrett, Maintenance Construction Foreman III at El Paso in District 24. Like many other men who use initials for their names, you may wonder just what those initials stand for.

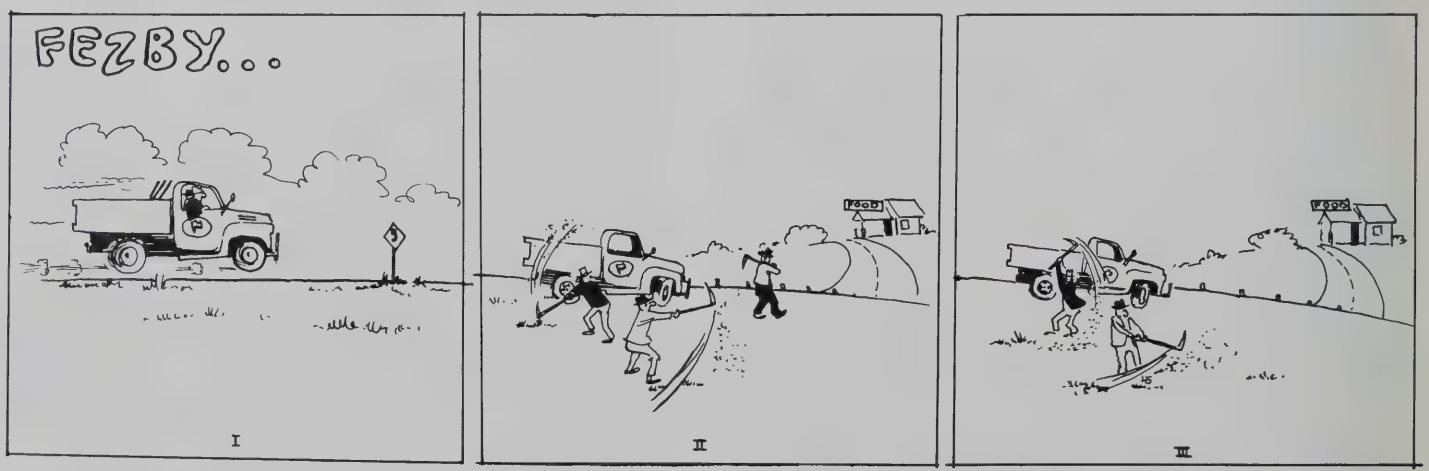
In O. F. Garrett's case, the O. F. stands for "Othello Ferdinand." The story behind this name is that O. F.'s mother was such an enthusiastic Shakespearean fan that she just couldn't resist naming her son in a true Shakespearean fashion.

This story was passed along to us by Steve Heacock, Administrative Technician III of the Maintenance Operations Division in Austin. Heacock used to know O. F. at El Paso before Heacock transferred to the Austin office.

Portable Vice

W. O. Coe Jr., Right of Way Agent II from Plano in District 18, sharpened up his pencil—and his wits—and sent in this letter:

"Regarding the portable vice rack discussed on page 29 of the October issue of *Texas Highways*, may I be one of the first hundred thousand to say (and I feel reasonably sure I speak for District 18 as a whole) that up in these parts we don't hold with anyone who claims you can have a self-respect-



ing vice rack without at least one wench —preferably more.

"Seriously, though, one cannot withhold credit where it is due. And, for a certainty, the information in the second paragraph (' . . . which means that a vice is always available at every location, and that it can be stored out of the way when it is not needed.') leads one to believe that a major breakthrough has occurred in the packaging industry."

On Television

Thomas K. Wood, District Administrative Engineer of District 14 in Austin, was host-moderator for a series of 10 programs about engineering on KTBC-TV this fall.

Travis Long, Supervising Resident Engineer, also of Austin, was in charge of the program devoted to highway transportation. The lectures, b i l l e d "Paths of Progress," were presented in cooperation with the Travis Chapter, Texas Society of Professional Engineers.

Wood will be installed in January as a regional vice president for the state society.

O. F. Henderson Retires

O. F. Henderson, Assistant Maintenance Engineer of Maintenance Operations Division, retired in November after 38 years with the Texas Highway Department.

Henderson recalled that he put down the first centerstripe in Travis County. The four-man crew used a four-inch paintbrush, stooping over and painting the centerline as they walked along. The asphalt was heated in a small painting pot suspended from a truck following the painters. This was back in 1926 when Henderson first joined the Department.

Henderson's work as Assistant Maintenance Engineer included coordinating the office activities, handling requests for funds for maintenance projects, checking requisitions for maintenance materials, and taking care of permits for routing special overweight and oversized permits.

O. F. Henderson, left, accepts a service certificate from John Waller, head of the Maintenance Operations Division. Henderson also was presented the fishing reel at his retirement reception in November.

Back Cover

Jack Lewis took to the air to take this picture of a busy Fort Worth interchange. Looking west, I.H. 35W interchanges with S.H. 121 and Belknap Street.

TEXAS HIGHWAY COMMISSION

HERBERT C. PETRY JR.	**Chairman**
HAL WOODWARD	**Member**
J. H. KULTGEN	**Member**
D. C. GREER	**State Highway Engineer**

Texas Highways

TEXAS HIGHWAYS, official journal of the Texas Highway Department, is published in the interest of highway development in Texas and for departmental education in the improvement of construction, maintenance, and operation.

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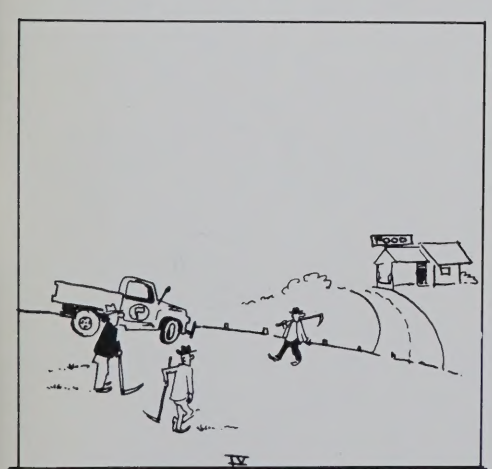

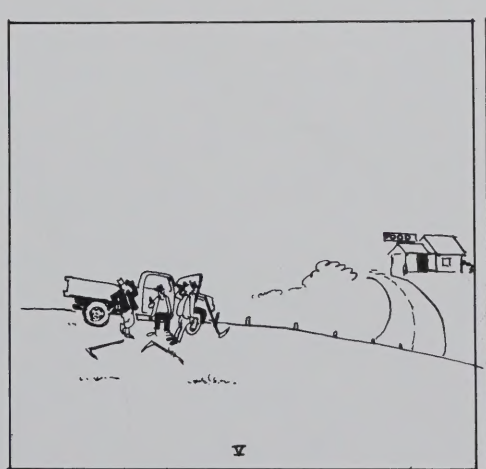

OVER THE HIGHWAYS

Comments . . . from the Traveling Public

● Please post this so all the men can see it, as I was unable to get any names.

On the morning of June 13, 1963, on F.M. 1187, I was working on a house and fell off a ladder and broke my left shoulder and arm in six places.

A Texas Highway Department truck was in the vicinity and saw my need for help. The two men in this truck picked me up off the ground, fixed a sling for my arm and put me in the pickup for me to be carried to the doctor.

I am greatly grateful for their help. Only wish I could have learned the names of these two men so I could thank them in person. I sincerely hope they see this letter and receive my thanks again.

Mrs. Nolan Strahan
Fort Worth, Texas

(Editor's Note: Later it was learned that the two helpful employes were Ora J. Davis Jr. and Melvin J. Henderson of District 2.)

● I shall appreciate it very much if you will please send me two more copies of "Texas—Today's Fun-tier."

I know my Texas pretty well by continual exposure dating back nearly 40 years when I was a Yankee peddler, and the empire of Texas was part of my regular beat, working for the same company that I still am. That was back when the pavement stopped at Fort Worth going west.

This is the most terrific brochure that I think I have ever seen of its kind and the spectacular feature of it is that it is not exaggerated.

I want to send one of these to France as a pitch to get some friends of mine over here, and this will do it if anything will. My compliments to the visionaries who created and materialized this wonderful booklet.

Howard M. Fish
American Sterilizer Company
Erie, Pennsylvania

● My grandson wrote you and has eceived his travel guide and touring nformation and is quite astonished that here is so much in Texas he has missed. He was born in Houston in 1942 and is very proud to be a Texas-born citizen. I would like to know if I may get one, too, for I have been around Texas an awful lot, but there is a lot that I have missed out on myself.

Truly! Texas is the most beautiful state in the nation and has to my taste most of the other states beat. Going to San Antonio Sunday morning the cactus was in bloom along the roadside, the fields green and fresh, and cattle grazing. I tell you, it was a gorgeous sight. I am most interested in getting a travel guide and information on what is the most scenery to view while traveling through Texas. My husband and I and my daughter are all from New Orleans, Louisiana, came to Texas in 1937 and we have been here 26 years and love it too much to think of returning to Louisiana. We have been asked by my brother if we had considered going back, and we said no! that we wanted to stay.

Mrs. J. B. Hoelzel
Houston, Texas

● My name is Jimmy Hixon. I'm 11 years old. I think your state is a vere nise one. Wood you plese sin me some information on your state. We mite come to the state sometime this summer. We look for arrowheads al the time. And we mite come to look for some. Think you for al the troblle you went to. Your friend,

Jimmy Hixon
Rogers, Arkansas

● I am a seventh grade student at Cullen Junior High School in Corpus Christi. Our Texas History class has been assigned to hand in a notebook on various important historical points of interest in our state.

I will appreciate your sending me information about the historical interests in your area.

Houston Evans
Corpus Christi, Texas

P.S.—I think you can tell by my name that I am interested in this far more than just as a project. For some day I shall be your Governor.

An airplane-borne camera caught this lengthy view of the newly completed segment of Interstate Loop 820 in Fort Worth. Dedicated in September, the new 10-mile segment is the longest section of freeway ever opened in a single unit in the Fort Worth area. A feature inside this issue tells about the new roadway.